

## EDITORIAL

Johannes Müller, Speaker Graduate School Human Development in Landscapes

Our International Workshop in April with more than 300 participants was a thorough success. Several sessions will publish their proceedings in the near future, and we are already looking forward to the next



Photo: private

International Workshop in spring of 2015. Meanwhile, other events connect the international scientific community with Kiel and the Graduate School: From July 30 to August 8, Noer Manor near Eckernförde saw an unprecedented accumulation of modeling expertise when young scholars from all

over Europe assembled there for a Summer School on 'Modelling Human Behaviour in Landscapes', guided by Oliver Nakoinz.

Another highlight in the scientific calendar is the upcoming Autumn Conference of the Association for Environmental Archaeology, which will be held in Kiel for the first time in late September. We look forward to welcoming high-ranking guests, especially from Great Britain. And on August 22/23, the Graduate School organizes an interdisciplinary postdoctoral symposium titled "New Perspectives on Human Development in Landscapes".

As every summer, Graduate School members spread out across the world for excavations. The locations range from nearby Büdelsdorf and Oldenburg-Dannau, over Slovakia and Ukraine, to Peru. Our third generation PhD students have also enjoyed some joint field campaigning as part of their course program, including a multidisciplinary on-scene introduction to early medieval Haithabu.

I wish all members, partners and friends of the Graduate School a fruitful, productive summer.

### Research Spotlight

## aDNA PROVIDES INSIGHT INTO THE HISTORY OF LEPROSY

Leprosy has been plaguing mankind for at least 4.000 years. This devastating infectious and chronic disease was widespread in Europe until the Late Middle Ages, today it is still found in 91 countries worldwide. The sick were, and in some countries such as India still are, sent to leper asylums, so-called leprosariums. During the last century, mankind has found ways of fighting the disease with multidrug treatment. This has led to a significant decrease in the number of new cases since the 1960s.



Skull of a ca. 25-year-old woman with leprosy from a medieval cemetery in Denmark. The genetic material extracted from her skeleton enabled the decoding of the genome of the leprosy pathogen.

Science is now going one step further in understanding the disease: An international team of researchers, including Graduate School members Almut Nebel and Ben Krause-Kyora, has reconstructed a dozen medieval and modern genomes of the leprosy-causing bacteria *Mycobacterium leprae* from skeletons and biopsies. The DNA of the pathogen was so well-preserved in one of the skeletons that for the first time no reference sequence was needed to assemble the ancient pathogen from scratch. The comparison of the medieval and modern *Mycobacterium leprae*

genomes showed that they all have a common ancestor no older than 4000 years. Obviously, the bacteria's genetic material changed unusually little during the last 1000 years, presumably without effect on the virulence of the pathogen. This suggests that the end of the leprosy epidemic in Europe was influenced by other factors such as changes in social and environmental conditions or host genetic factors during the Middle Ages. Nebel and Krause-Kyora are currently engaged in investigating these factors.

More information about the genome decoding of the medieval leprosy pathogen is available on the Graduate School website: [www.uni-kiel.de/landscapes/allgemein/news\\_detail/20130614-lepra\\_science.shtml](http://www.uni-kiel.de/landscapes/allgemein/news_detail/20130614-lepra_science.shtml)

## BÜDELSDORF: ENCLOSURE EXCAVATION



A team of archaeologists from Kiel University's Institute of Pre- and Protohistory investigates the history of a causewayed enclosure in Büdelsdorf and its relation to megalithic tombs in nearby Borgstedt. Both are sites of the northern Funnel Beaker Culture in Southern Jutland. This summer, the focus is on Büdelsdorf in the vicinity of Rendsburg. A ditch of 45 meters has been dug in the wood by the Eider to find remains left behind by the people who once built and used the enclosure, be it as a settlement or as a ritual place. The excavation, which is directed by associated Graduate School members Franziska Hage and Hauke Dibbern, is part of the research activities within the DFG priority program 1400 "Early Monumentality and Social Differentiation".

Further excavations by Graduate School members this summer take place in the Linear pottery settlement Vrable (Slovakia), headed by Martin Furholt, and in the Tripolje settlement Majdanekskoje (Ukraine), under the guidance of Johannes Müller, Robert Hofmann and Carsten Mischka.

More information about the Büdelsdorf/Borgstedt project is available here: [www.monument.ufg.uni-kiel.de/en](http://www.monument.ufg.uni-kiel.de/en).

## GRADUATE SCHOOL ALUMNI (VI): RÉMI BERTHON

Most PhD students of the first generation have finished their dissertation by now and found positions in diverse fields. We keep in touch with them and trace their next steps after they leave the Graduate School. Where are they going after their PhDs, and what are they doing there?

Paris, southern Anatolia and the Caucasus: After finishing his PhD on "Animal Exploitation in the Upper Tigris Valley (Turkey) between the 3<sup>rd</sup> and the Middle of the 1<sup>st</sup> Millennium B.C." in late 2011, Rémi Berthon continues his scientific career in several directions. Having left Kiel, he started teaching classes about the Ancient Near East at the Ecole du Louvre and about Animal Osteology at the Muséum national d'Histoire

naturelle, both in Paris. “I always appreciated to be at the junction between the anthropological approach of archaeology and the biological approach of faunal remains studies”, Rémi says. “That is probably why I was so comfortable at the Graduate School, which is probably the most interdisciplinary atmosphere one could find.”

Photo: private



The Azerbaijanian exclave of Nakhchivan is one of the places where Rémi Berthon is working now.

Besides teaching classes, Rémi continues to work on the archaeological sites of his PhD project in eastern Turkey. “All these sites will soon be flooded due to the completion of a dam on the Tigris River, so I want to register as much data as possible before this cultural heritage is destroyed”, he describes his dedication to the venture.

His next engagement leads Rémi further east: Since July 2013, he works as a post-doctoral fellow in the MINES project, led by the UMR 5133 Archéorient Laboratory of the CNRS in Lyon and the Institut für archäologische Wissenschaften at Bochum University. Funded by Agence Nationale de la Recherche and German Research Foundation, MINES aims at understanding the emergence of early mining in the Caucasus. People there started using mining technologies to produce salt, copper and gold in the late 5th millennium BC, which is very early even in worldwide comparison. “We still know very little about the origins of mining in that area and about its socio-economic context”, Rémi explains. To find out more, he is going to do zooarchaeological and isotopic analyses on faunal remains from sites in Georgia and Azerbaijan. Furthermore, Rémi is responsible for new excavations at a Neolithic site called “Kültepe I of Nakhchivan” in Azerbaijan.

Summing up his time at the Graduate School, Rémi concludes: “One of the things I learned at the GS is to push your methodological and technological limits, and not to be afraid to use new tools in order to get new answers to old questions.”

## HAPPY WINNERS



Sabine Neumann and Katherine Grillo are the first winners of the Johanna Mestorf Award for Socio-Environmental Research and Landscape Archaeology. The prize was handed over on April 18 by Wara Wende, Minister of Science and Education of Schleswig-Holstein.

## STAFF & PERSONAL NEWS

**Elke Hänßler** defended her dissertation on “Holocene coastal evolution in Greece: Lagoons as geo-archives” on July 10.

**Marion Bonazzi** was awarded the EvE (Evolution and Ecology) Award for her master thesis: “Quantitative evaluation of the ancient DNA losses during computed tomography scanning of paleontological remains” from the Institute for Evolution and Ecology of the Eberhard Karls Universität Tübingen.

Graduate School alumna **Annegret Larsen** and her co-authors have published their research results about gully sediment delivery in ScienceDirect ([www.sciencedirect.com/science/article/pii/S0169555X13003449#](http://www.sciencedirect.com/science/article/pii/S0169555X13003449#)). The research activities this article reports about were part of Annegret’s PhD thesis.

The “landscape discussion group” headed by **Frank Förster** has published an interdisciplinary paper on the term “landscape” in Quaternary International. “Towards mutual understanding within interdisciplinary palaeoenvironmental research: An exemplary analysis of the term landscape” is available here: [www.sciencedirect.com/science/article/pii/S1040618213004448](http://www.sciencedirect.com/science/article/pii/S1040618213004448).

**Philipp Meurer** published an essay titled “Representations of Reality, Constructions of Meaning. Netherlandish Winter Landscapes during the Little Ice Age and Olafur Eliasson’s “Glacier Series”” in the collective volume “Aesth/Ethics in Environmental Change - Hiking through the arts, ecology, religion and ethics of the environment” (Eds. Sigurd Bergmann, Irmgard Blindow, Konrad Ott, LIT Verlag 2013).

**Claudia Ohlsen** is “live on air” in the Deutschlandfunk radio programme “Lebenszeit” ([www.dradio.de/dlf/sendungen/lebenszeit/](http://www.dradio.de/dlf/sendungen/lebenszeit/)) on August 23 from 10:10 to 11:30 a.m. The title of the broadcast is “Der Großstadt den Rücken kehren? Der Traum vom Landleben” („Turning one’s back on the big city? The dream of rural life“). Claudia and several other guests in the studio will discuss current developments and answer related questions.

A few days before her nationwide radio appearance, on August 20 Claudia participates in the congress „100 Jahre alt oder 66 Jahre jung. Die Geschichte und Entwicklung der LandFrauen in Schleswig-Holstein“ („100 years old or 66 years young. The history and development of the country women in Schleswig-Holstein). She talks about „Kultfaktor Landleben“ („Cult factor rural life“). The event is organized by the Verein zur Förderung der Weiterbildung im LandFrauenVerband Schleswig-Holstein and takes place at Ludwigsburg manor near Eckernförde.

**Welmoed Out** has started as postdoctoral fellow for the development of innovative archaeobotanical proxies on August 1.

## SELECTED EVENTS (complete calendar: [www.uni-kiel.de/landscapes](http://www.uni-kiel.de/landscapes))

Venue for Biweekly Colloquia: Leibnizstraße 1, Room 204

### August/September

August 22-23 – Postdoctoral Symposium “New Perspectives on Human Development in Landscapes” – Leibnizstraße 1, Room 204

August 18 - September 14 – **Excavation** in the Linear pottery settlement Vrable (Slovakia)

August 25 - September 22 – **Excavation** in the Tripolje settlement Majdanekojke (Ukraine)

### October

Monday, October 21, 5:00 p.m. – **Biweekly Colloquium**

### November

November 8-9 – **Introductory Workshop II** - Bad Malente